

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein. All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable distortions. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug, no heat-treated plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area", hereinafter "Landscape Guidelines" approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications.

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plant list take precedence.

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope.

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

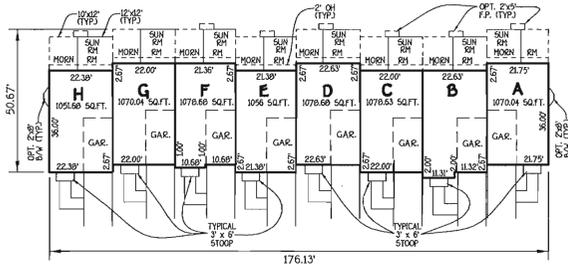
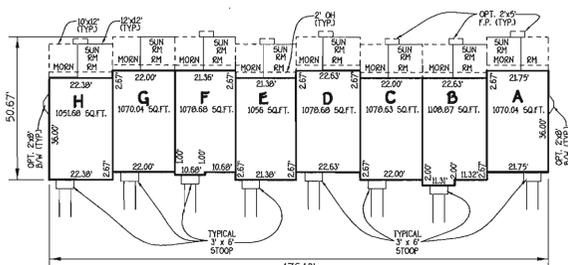
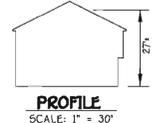
Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
NUMBER OF DWELLING UNITS	44
NUMBER OF TREES REQUIRED: (1:DU SFA: 1:3 DU APTS.)	44
NUMBER OF TREES PROVIDED: SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	44

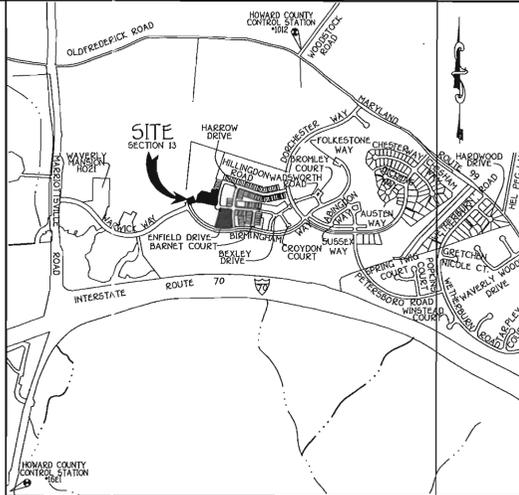
LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
44	(Symbol)	ACER RUBRUM OCTOBER GLORY OCTOBER GLORY MAPLE	2-1/2" - 3" CALIPER FULL CROWN B/D

FINANCIAL SURETY FOR THE INTERNAL LANDSCAPING IN THE AMOUNT OF \$13,200.00 (44 X \$300.00) FOR THE REQUIRED 44 TREES WILL BE PAID FOR AT TIME OF GRADING PERMIT APPLICATION BY THE BUILDER.



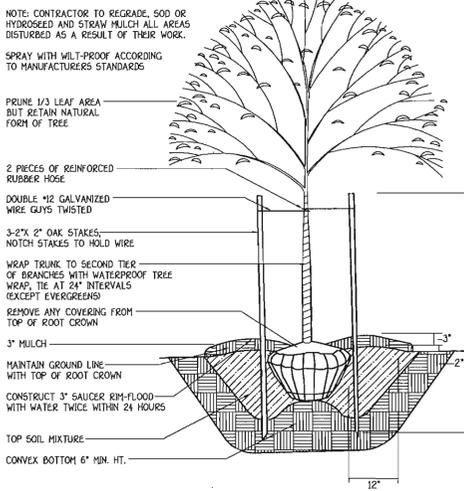
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET, LANDSCAPE NOTES & DETAILS
2	SITE DEVELOPMENT PLAN, LOTS 19-62
3	SEDIMENT/EROSION CONTROL PLAN, LOTS 19-62
4	SEDIMENT/EROSION CONTROL PLAN, LOTS 19-62

LEGEND	
SYMBOL	DESCRIPTION
-----	EXISTING CONTOUR 2' INTERVAL
-----	PROPOSED CONTOUR 2' INTERVAL
x 624.07	SPOT ELEVATION
---	SUPER SILT FENCE
---	PROPOSED WALKOUT
---	EXISTING TREE LINE
LOD	LIMIT OF DISTURBANCE
(Symbol)	EXISTING STREET TREES FROM F-04-50, F-01-31 & F-90-25
(Symbol)	LANDSCAPE TREES



VICINITY MAP
SCALE: 1" = 1200'

- GENERAL NOTES:**
- SUBJECT PROPERTY ZONED RSA-B PER 2/2/04 COMPREHENSIVE ZONING PLAN.
 - THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1800 AT LEAST 72 HOURS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT (410)925-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
 - THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES 5-94-07, F-04-19, F-04-50, F-04-50A, F-90-25, F-01-31, F-00-17 AND ZONING BOARD CASE NO. ZB95-04, W & S (CONTINO 24-3059-D & NO. 24-1474-D).
 - TOPOGRAPHY TAKEN FROM FINAL ROAD CONSTRUCTION, GRADING AND SEDIMENT CONTROL PLANS.
 - BOUNDARY SURVEY PERFORMED BY FISHER COLLINS AND CARTER INC. ON OR ABOUT AUGUST, 1990.
 - HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY QUOTED CONTROL STATIONS: HOWARD COUNTY MONUMENT NO. 1022 N 60160177 E 134336.7560 ELEV. 445.577 HOWARD COUNTY MONUMENT NO. 1021 N 593250.9322 E 134092.7101 ELEV. 543.504
 - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
 - THIS PLAN IS FOR HOUSE SITING AND LOT GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAYS OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-01-31, F-04-50 AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-3059-D, AND 24-1474-D.
 - CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
 - STORMWATER MANAGEMENT OBLIGATIONS ARE FULFILLED UNDER F-95-174.
 - SITE ANALYSIS DATA:
A. TOTAL PROJECT AREA: 2,509 AC+ OR 109,292.04 SQ. FT.
B. AREA OF PLAN SUBMISSION: 2,509 AC+ OR 109,292.04 SQ. FT.
C. LIMIT OF DISTURBED AREA: 3,282 AC+ OR 142,950.00 SQ. FT.
D. PRESENT ZONING: RSA-B
E. PROPOSED USE FOR SITE AND STRUCTURES: SINGLE FAMILY ATTACHED DU.
F. TOTAL NUMBER OF UNITS ALLOWED: 44
G. TOTAL NUMBER OF UNITS PROPOSED: 44
H. NUMBER OF PARKING SPACES REQUIRED: 89
I. NUMBER OF PARKING SPACES PROVIDED (INCLUDING 65 GARAGE PARKING SPACES): 105
 - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$13,200.
 - GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY IN ACCORDANCE WITH SECTION 13.022.A OF THE HOWARD COUNTY ZONING REGULATIONS.
 - TYPICAL DRIVEWAY APRON DETAIL FOR ALL GARAGE UNITS TO BE HOWARD COUNTY CLOSED SECTION DETAIL, FOR SPECIFICATION NO. CO. STANDARD DETAIL R.6.01.
 - THE FOREST CONSERVATION OBLIGATION FOR SECTION 13 HAS BEEN FULFILLED BY F-04-50.
 - IN ACCORDANCE WITH SECTION 1201 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 18 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK. OPEN DECKS ARE NOT CONSIDERED STRUCTURES FOR CALCULATING LOT COVERAGE ON SINGLE FAMILY ATTACHED DWELLING PER HOWARD COUNTY ZONING REGULATIONS SECTION 1202.A.2.
 - ALL DWELLINGS ARE SUBJECT TO SECTION 1202.A.1 b AND c OF THE HOWARD COUNTY ZONING REGULATIONS.
 - DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
WIDTH - 12' MIN SERVING MORE THAN ONE RESIDENCE;
SURFACE - 6" OF COMPACTED CRUSHED RUN BASE W/AT LEAST 1" CHIP COATING (1-1/2" MIN. GEOMETRY - MAX. 1% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS. STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (250,000 LBS) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
 - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS, OR THEIR BUFFERS AND FOREST CONSERVATION AREAS.



TREE PLANTING DETAIL
NOT TO SCALE

BUILDER/DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

John Lewis 11/11/04
JOHN LEWIS DATE



ENGINEER'S CERTIFICATE
"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Earl D. Collins 11.10.04
Signature of Engineer EARL D. COLLINS Date

BUILDER/DEVELOPER'S CERTIFICATE
"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

John Lewis 11/11/04
Signature of Developer JOHN LEWIS Date

Reviewed for HOWARD SCD and meets Technical Requirements.
Jim Myer 12/2/04
Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
John K. Roberts 12/2/04
Date

OWNER/DEVELOPER	BUILDER
GTW JOINT VENTURE C/O LAND DESIGN & DEVELOPMENT CORP. 8000 MAIN STREET ELLCOTT CITY, MARYLAND 21043 410-480-5105	RYAN HOMES, INC. 6005 MARSHALEE DRIVE SUITE 140 ELK RIDGE, MARYLAND 21075 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Conita Hamrick 12/7/04
Chief, Department of Planning and Zoning Date

John Lewis 12/16/04
Date

PROJECT	SECTION	LOTS NO.			
GTW'S WAVERLY WOODS	13	19 THRU 62			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	RSA-B	16	THIRD	6030.00
WATER CODE	SEWER CODE				
H-03	5993000				

TITLE SHEET, LANDSCAPE NOTES & DETAILS

TOWNHOUSES
GTW'S WAVERLY WOODS
SECTION 13
LOTS 19 THRU 62
ZONED: RSA-B
TAX MAP NO: 16 PARCEL NO.: 20 GRID NO.: 5
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2004
SHEET 1 OF 4

SDP 05-004



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 DALTHORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-461-2355

NO.	REVISION	DATE



ENGINEER'S CERTIFICATE
 "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer: *Earl D. Collins* Date: 11-10-04
EARL D. COLLINS

BUILDER/DEVELOPER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *John Lewis* Date: 11/11/04
JOHN LEWIS

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: *Jan Myron* Date: 12/2/04
Jan Myron
 U.S. Natural Resources Conservation Service

The development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John R. Roberts* Date: 12/2/04
John R. Roberts
 Howard SCD

OWNER/DEVELOPER
 GTW JOINT VENTURE
 C/O LAND DESIGN & DEVELOPMENT CORP.
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 410-460-9105

BUILDER
 RYAN HOMES, INC.
 6085 MARSHALEE DRIVE
 SUITE 140
 ELK RIDGE, MARYLAND 21075
 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Cindy Hamble* Date: 12/7/04
Cindy Hamble
 Chief, Division of Land Development

Signature: *John Vermeulen* Date: 12/10/04
John Vermeulen
 Chief, Development Engineering Division

Signature: *David DeLozier* Date: 12/16/04
David DeLozier
 Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.			
GTW'S WAVERLY WOODS	13	19 THRU 62			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	R5A-B	16	THIRD	6030.00
WATER CODE	SEWER CODE				
H-03	5993000				

SITE DEVELOPMENT PLAN

TOWNHOUSES
 GTW'S WAVERLY WOODS
 SECTION 13
 LOTS 19 THRU 62
 ZONED: R5A-B

TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"= 30' DATE: JULY, 2004
 SHEET 2 OF 4

SDP 05-004



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 1000 CENTRAL SQUARE OFFICE PARK - 1002 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 461-2555

NO.	REVISION	DATE



ENGINEER'S CERTIFICATE
 "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer: *Earl D. Collins* DATE: 11/10/04
 EARL D. COLLINS

BUILDER/DEVELOPER'S CERTIFICATE
 "I/we certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *John Lewis* DATE: 11/11/04
 JOHN LEWIS

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: *Jim Meyer* DATE: 12/21/04
 U.S. Fish & Wildlife Service, Conservation Service

Signature: *John K. Patton* DATE: 12/21/04
 HOWARD SOIL CONSERVATION DISTRICT

OWNER/DEVELOPER
 GTW JOINT VENTURE
 C/O LAND DESIGN & DEVELOPMENT CORP.
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21103
 410-480-9105

BUILDER
 RYAN HOMES, INC.
 6005 MARSHALLEE DRIVE
 SUITE 140
 ELK RIDGE, MARYLAND 21075
 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Conrad Hamilton* DATE: 12/21/04
 Chief, Division of Land Development & Conservation Service

Signature: *John K. Patton* DATE: 12/21/04
 Chief, Development Engineering Division

Signature: *Mark A. Lopez* DATE: 12/11/04
 Director - Department of Planning and Zoning

PROJECT: GTW'S WAVERLY WOODS SECTION: 13 LOTS NO.: 19 THRU 62

PLAT	BLOCK	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	R5A-B	16	THIRD	6030.00

WATER CODE: H-03 SEWER CODE: 5993000

SEDIMENT/EROSION CONTROL PLAN

TOWNHOUSES
GTW'S WAVERLY WOODS
 SECTION 13
 LOTS 19 THRU 62
 ZONED: R5A-B

TAX MAP NO: 16 PARCEL NO: 20 GRID NO.: 5
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"= 30' DATE: JULY, 2004
 SHEET 3 OF 4

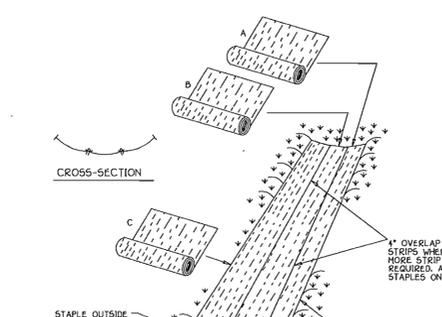
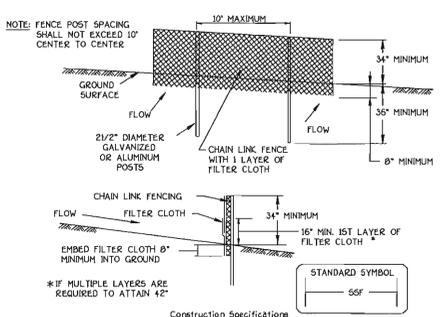
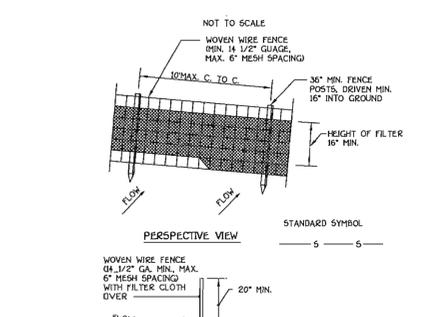
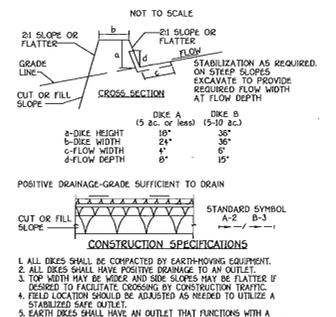
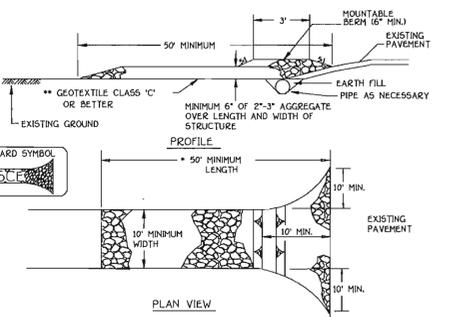
SDP 05-004

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover for bare soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to infiltrate. This reduces sediment loading and run-off to downstream areas, and improves wildlife habitat and visual resources.

This practice shall be used on denuded areas as specified on the plans and not used on highly erodible or critically eroding areas. The specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of appropriate areas for Temporary Seeding are temporary soil stabilization, cleared areas being left between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dunes, cut and fill slopes and other areas of final grade. For slope stabilization, vegetative stabilization is used on slopes of 1:1 or less and on other areas of final grade. For slope stabilization, vegetative stabilization is used on slopes of 1:1 or less and on other areas of final grade.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff. Infiltration, evaporation, transpiration, percolation and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater by absorbing these substances present within the root zone. Sediment control devices must remain in place during grading, seeded, planting, seeding, mowing and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

Construction Specification

- Length - minimum of 50' (30' for single residence lot).
- Width - minimum of 48" (36" for single residence lot) to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. *The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate 1/2" to 3/4" or reclaimed concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or derived from construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable beam with 5:1 slopes and a minimum of 5' of stone over the pipe. Pipe has to be sized according to the drainage. When the 5:1 is located at a high spot and has no drainage to convey a pipe will not be necessary. A 6" minimum will be required according to the amount of runoff to be conveyed.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

FLOW CHANNEL STABILIZATION

TYPE OF CHANNEL TREATMENT	GRADE	DISK A	DISK B
1	5-10%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	31-50%	SEED AND STRAW MULCH	SEED USING UTE, OR EXCELLENCE; 500# 2" STONE
3	51-80%	SEED WITH UTE, OR 500# 2" STONE	SEED WITH UTE, OR 500# 2" STONE
4	81-100%	SEED WITH UTE, OR 500# 2" STONE	SEED WITH UTE, OR 500# 2" STONE

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

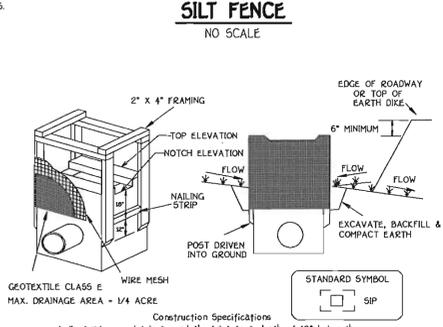
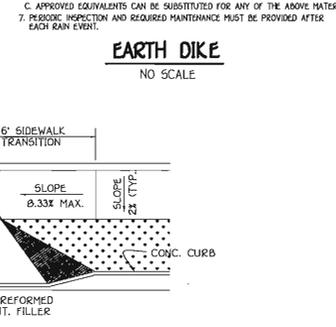
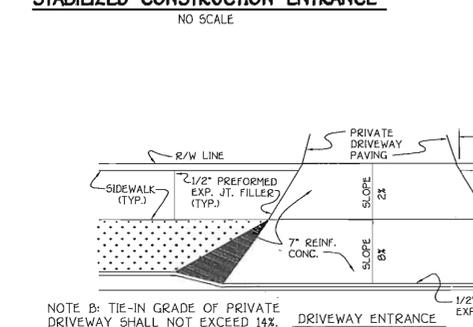
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.

SILT FENCE
NO SCALE

SUPER SILT FENCE
NO SCALE

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (31-509).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND VERSIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-RESTORANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 17 CALENDAR DAYS FOR ALL PROJECTS SUBJECT TO THESE STANDARDS, DISKS, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, IN 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/DAMS SHOWN SHALL BE TESTED AND WARNING SIGNS POSTED AROUND THESE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (GEC 50, 500 LB/AC; SA, TEMPORARY SEEDING (GEC 50), AND MULCHING (GEC 50). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSON FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS: TOTAL AREA OF SITE: 2,509 ACRES; AREA DISTURBED: 1,984 ACRES; AREA TO BE VEGETATIVELY STABILIZED: 2,133 ACRES; TOTAL DIRT CLOUSE: N/A; OFFSITE WASTES/DROPPED AREA LOCATION: N/A.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDING PREPARATION

LOOSEN UPPER THREE INCHES OF SOIL BY RAZING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS

APPLY TWO TONS PER ACRE DOLOMITE LIMESTONE (50 LB/1,000 SQFT) AND 600 LBS PER ACRE 0-20-20 FERTILIZER (14 LB/1,000 SQFT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 600 LBS PER ACRE 30-0-10 UREA/AMMONIUM FERTILIZER (9 LB/1,000 SQFT) OF 10-20-20 FERTILIZER.

SEEDING

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE (2) LBS/1,000 SQFT OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 100 LBS/ACRE (4) LBS/1,000 SQFT KENTUCKY 31 TALL FESCUE AND 2 LBS PER ACRE (0.05) LBS/1,000 SQFT OF WHEATGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 29, PROJECT SITE BY OPTION (D) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (E) - USE 500 LBS OPTION (D) SEED WITH 100 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDING.

MULCHING

APPLY 1 TO 2 TONS PER ACRE (80 TO 160 LBS/1,000 SQFT) OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH USING 200 GALLONS PER ACRE OF CALGALLOON SQFT OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. APPLY 1 TO 2 TONS PER ACRE (80 TO 160 LBS/1,000 SQFT) OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH USING 200 GALLONS PER ACRE OF CALGALLOON SQFT OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.

MAINTENANCE

INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

FOR PUBLIC FUNDING SUBSTITUTE CHIMNEY GROUNDWATER AT 10 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS THE SEEDING REQUIREMENT. OPTION SEEDING DATE FOR THIS PRACTICE IS MARCH 1 TO APRIL 30.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED IMMEDIATELY PREPARED COVER IS AVAILABLE.

SEEDING PREPARATION

LOOSEN UPPER THREE INCHES OF SOIL BY RAZING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY SOIL AMENDED.

SEEDING

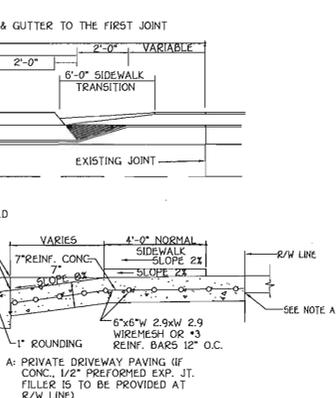
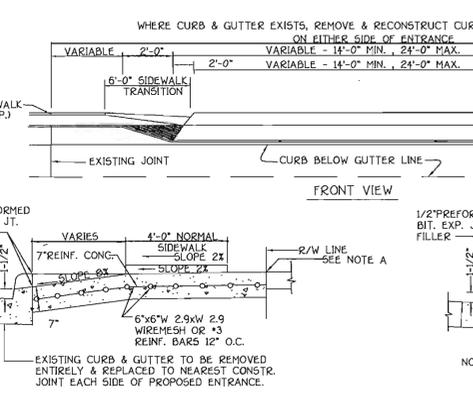
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MULCHING

APPLY 1 TO 2 TONS PER ACRE (80 TO 160 LBS/1,000 SQFT) OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH USING 200 GALLONS PER ACRE OF CALGALLOON SQFT OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. APPLY 1 TO 2 TONS PER ACRE (80 TO 160 LBS/1,000 SQFT) OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH USING 200 GALLONS PER ACRE OF CALGALLOON SQFT OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.

MAINTENANCE

INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



CONSTRUCTION SPECIFICATIONS

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (over) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E fabric over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet) in compacted 6" layers until the level of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION
NO SCALE

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDING PREPARATION

LOOSEN UPPER THREE INCHES OF SOIL BY RAZING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS

APPLY TWO TONS PER ACRE DOLOMITE LIMESTONE (50 LB/1,000 SQFT) AND 600 LBS PER ACRE 0-20-20 FERTILIZER (14 LB/1,000 SQFT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 600 LBS PER ACRE 30-0-10 UREA/AMMONIUM FERTILIZER (9 LB/1,000 SQFT) OF 10-20-20 FERTILIZER.

SEEDING

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE (2) LBS/1,000 SQFT OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 100 LBS/ACRE (4) LBS/1,000 SQFT KENTUCKY 31 TALL FESCUE AND 2 LBS PER ACRE (0.05) LBS/1,000 SQFT OF WHEATGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 29, PROJECT SITE BY OPTION (D) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (E) - USE 500 LBS OPTION (D) SEED WITH 100 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDING.

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MAINTENANCE

INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

FOR PUBLIC FUNDING SUBSTITUTE CHIMNEY GROUNDWATER AT 10 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS THE SEEDING REQUIREMENT. OPTION SEEDING DATE FOR THIS PRACTICE IS MARCH 1 TO APRIL 30.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED IMMEDIATELY PREPARED COVER IS AVAILABLE.

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SEEDING

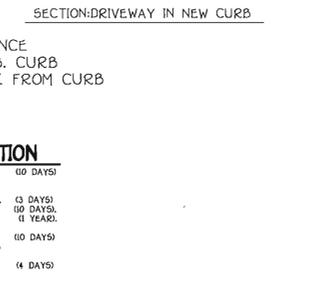
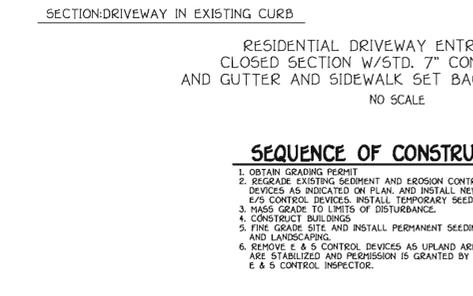
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STANDARD INLET PROTECTION
NO SCALE

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MAINTENANCE

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FOR PUBLIC FUNDING SUBSTITUTE CHIMNEY GROUNDWATER AT 10 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS THE SEEDING REQUIREMENT. OPTION SEEDING DATE FOR THIS PRACTICE IS MARCH 1 TO APRIL 30.

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MAINTENANCE

INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

NO.	REVISION	DATE
1.	OBTAIN GRADING PERMIT	00 DAYS
2.	REMOVE EXISTING SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON PLAN, AND INSTALL NEW E/S CONTROL DEVICES. INSTALL TEMPORARY SEEDING.	03 DAYS
3.	MASS GRADE TO LIMITS OF DISTURBANCE.	00 DAYS
4.	CONSTRUCT BUILDINGS.	01 YEAR
5.	FINISH GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPING.	00 DAYS
6.	REMOVE E & S CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E & S CONTROL INSPECTOR.	04 DAYS

RESIDENTIAL DRIVEWAY ENTRANCE
CLOSED SECTION W/STD. 7" COMB. CURB AND GUTTER AND SIDEWALK SET BACK FROM CURB
NO SCALE

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer: EARL D. COLLINS
Date: 11/10/04

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I/We also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: JOHN LEWIS
Date: 11/11/04

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: Jim M...
Date: 12/2/04

Signature: John L...
Date: 12/2/04

OWNER/DEVELOPER
GTW JOINT VENTURE
C/O LAND DESIGN AND DEVELOPMENT CORP.
8000 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
410-480-9105

BUILDER
RYAN HOMES
6095 MARSHALLE DRIVE
ELKRIEDE, MARYLAND 21075
410-796-0900

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: Cindy Hamilton
Date: 12/2/04

Signature: John Lewis
Date: 12/2/04

Signature: John Lewis
Date: 12/2/04

Signature: John Lewis
Date: 12/2/04

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	R5A-B	16	THIRD	6030.00

WATER CODE: H-03
SEWER CODE: 5993000

SEDIMENT/EROSION CONTROL NOTES & DETAILS

TOWNHOUSES
GTW'S WAVERLY WOODS
SECTION 13
LOTS 19 THRU 62
ZONED: R5A-B
TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2004
SHEET 4 OF 4

SDP 05-004

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover for barren soil to protect it from erosion. DEFINITION: Vegetative stabilization is the process of establishing vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas. The following standards and specifications apply to vegetative stabilization.

CONDITIONS WHERE PRACTICE APPLIES: This practice shall be used on disturbed areas as specified on the plans and may also be used on highly erodible or critically eroding areas. This specification is intended to provide a minimum standard for vegetative cover for short duration erosion control. It is not intended to provide a minimum standard for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stabilization, disturbed areas being left between construction phases, and areas for permanent seeding. Seeding areas include, but are not limited to, areas of final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY: Infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation over time will increase organic matter content to downstream areas, improve water habitat and improve water quality. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulling and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

- SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS**
- Site Preparation**
 - Install erosion and sediment control structures (either temporary or permanent) such as diversion, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and sloping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
 - Soil tests shall be performed to determine the exact ratios and application rates for both time and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Soil Amendment**
 - Fertilizers shall be understood and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully loaded according to the appropriate label and shall bear the name, trade name or trademark, and manufacturer of the product.
 - Line materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total oxide calcium with a minimum oxide. Limestone shall be ground to such fineness that at least 50% will pass through a #100 sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
 - Temporary Seeding**
 - Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using a 3" of soil by disk or other suitable means.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4' overlap pattern on either side.
 - The discharge end of the matting line should be similarly secured with 2 double rows of staples.

Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

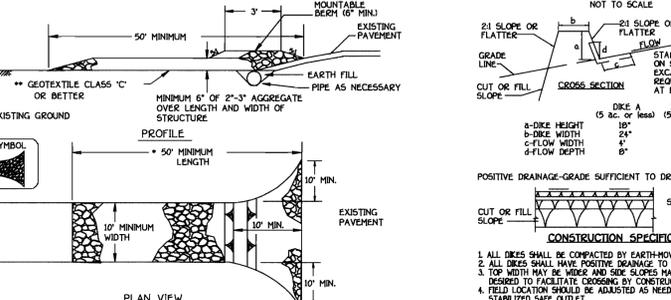
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lb/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /min (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
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- The discharge end of the matting line should be similarly secured with 2 double rows of staples.

EROSION CONTROL MATTING

NO SCALE

NOTE: If flow will enter from the edge of the matting then the area affected by the flow must be key-in.



STABILIZED CONSTRUCTION ENTRANCE

NO SCALE

Construction Specification

- Length - minimum of 50' (30' for single residence lot).
- Width - 50' minimum, should be placed at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require stone family resistance to use geotextile.
- Stone - crushed aggregate 1/2" to 3/4" or equivalent or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a moutable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the 50' is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

FLOW CHANNEL STABILIZATION

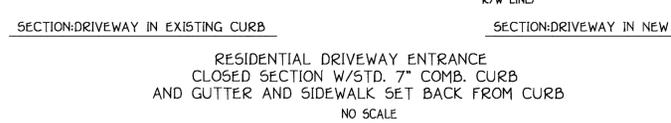
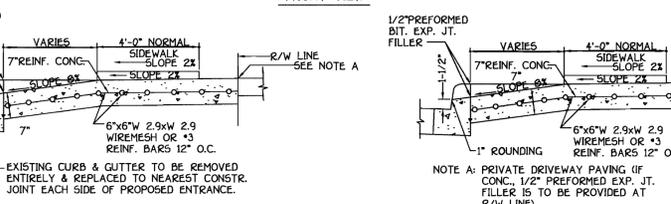
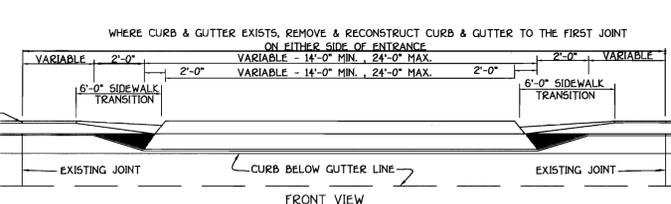
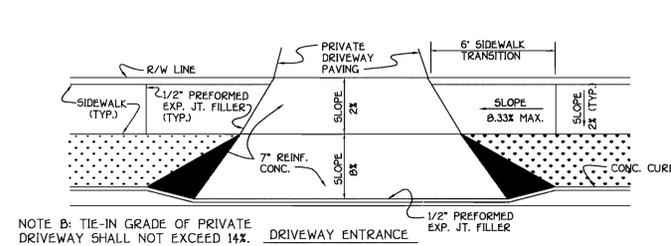
TYPE OF CHANNEL TREATMENT	GRADE	DECK A	DECK B
1	5-3/8"	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3 1/2-5/8"	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCLUSIONS: 500' 2" STONE
3	5 1/2-8/8"	SEED WITH JUTE, OR 500' 2" STONE	LINED RIP-RAP 4"-8"
4	8 1/2-10"	LINED RIP-RAP 4"-8"	ENGINEERING DESIGN

EARTH DIKE

NO SCALE

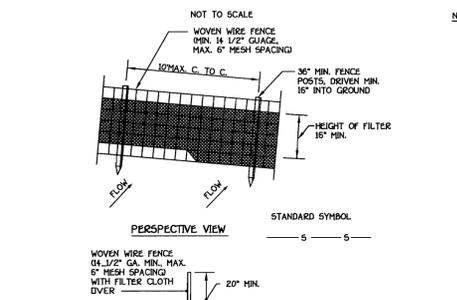
Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" framing construction grade lumber posts 1' into the ground at each corner of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23a. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The wire mesh must overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.



SEQUENCE OF CONSTRUCTION

NO.	REVISION	DATE
1	Obtain Grading Permit	00 DAYS
2	Regrade existing sediment and erosion control devices as indicated on plan and install temporary seeding	00 DAYS
3	Mass grade to limits of disturbance	00 DAYS
4	Construct buildings	01 YEAR
5	Final grade site and install permanent seeding and landscaping	00 DAYS
6	Remove E & S control devices as upland areas are stabilized and permission is granted by E & S control inspector.	04 DAYS



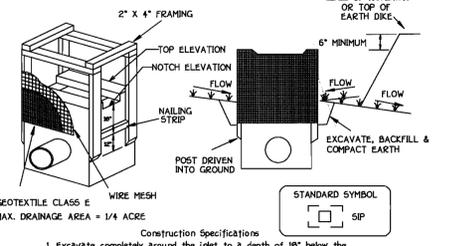
SILT FENCE

NO SCALE

Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lb/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /min (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322



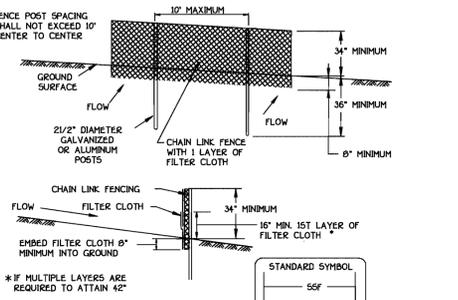
SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (303-B055).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-OBSTRUCTION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DICES, PERMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERE TO. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL DEPRESSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- OFFSITE WASTE/BORROW AREA LOCATION: CLYDUS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES.
- APPROVAL OF THE INSPECTION AGENCY SHALL BE OBTAINED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



STANDARD INLET PROTECTION

NO SCALE



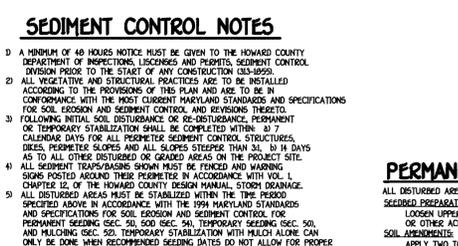
CHAIN LINK FENCE

NO SCALE

Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lb/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /min (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322



PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDING PREPARATION:

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:

APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (52 LBS/1000 SQFT) AND 500 LBS PER ACRE 0-20-20 FERTILIZER (4 LBS/1000 SQFT) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 0-10-10 UREA/NITROGEN FERTILIZER (9 LBS/1000 SQFT) AND 500 LBS PER ACRE 0-15-15/1000 SQFT OF 0-10-20 FERTILIZER.

SEEDING:

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH NOVEMBER 15, SEED WITH 100 LBS PER ACRE (2 LBS/1000 SQFT) OF KENTUCKY 311 TALL FESCUE FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS PER ACRE (0.4 LBS/1000 SQFT) KENTUCKY 311 TALL FESCUE AND 2 LBS PER ACRE (0.015 LBS/1000 SQFT) OF WHEAT. LONGLEAF, DURING THE PERIOD OF OCTOBER 15 THROUGH FEBRUARY 28, PROJECT SITE BY OPTION D - USE TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION C - USE 500 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE WITH TWO TONS PER ACRE OF GALLON(S) MULCH FOR ANCHORING.

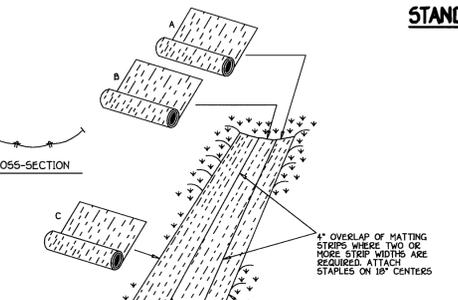
MULCHING:

APPLY 1 TO 2 TONS PER ACRE TO 90 LBS/1000 SQFT) OF UNNOTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 200 GALLONS PER ACRE (5 GALLON(S) OF EMULSIFIED ASPHALT ON FLAT ACRES OR SLOPES 6 FEET OR HIGHER. USE 340 GALLONS PER ACRE (3.4 GALLON(S) MULCH) FOR ANCHORING.

MAINTENANCE:

INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

* FOR PUBLIC PONDS SUBSTITUTE CHEMPUR CROWWEED AT 15 LBS PER ACRE AND KENTUCKY 311 TALL FESCUE AT 40 LBS PER ACRE. SEEDING REQUIREMENT, OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.



TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED IMMEDIATELY PRIOR TO THE START OF ANY CONSTRUCTION (303-B055).

SEEDING PREPARATION:

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS:

APPLY 500 LBS PER ACRE 10-10-10 FERTILIZER OR 4 LBS/1000 SQFT SEEDING.

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH NOVEMBER 15, SEED WITH 100 LBS PER ACRE (2 LBS/1000 SQFT) OF KENTUCKY 311 TALL FESCUE FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS PER ACRE (0.4 LBS/1000 SQFT) KENTUCKY 311 TALL FESCUE AND 2 LBS PER ACRE (0.015 LBS/1000 SQFT) OF WHEAT. LONGLEAF, DURING THE PERIOD OF OCTOBER 15 THROUGH FEBRUARY 28, PROJECT SITE BY OPTION D - USE TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE 500.

MULCHING:

APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQFT) OF UNNOTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 200 GALLONS PER ACRE (5 GALLON(S) OF EMULSIFIED ASPHALT ON FLAT ACRES OR SLOPES 6 FEET OR HIGHER. USE 340 GALLONS PER ACRE (3.4 GALLON(S) MULCH) FOR ANCHORING.

SEEDING:

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

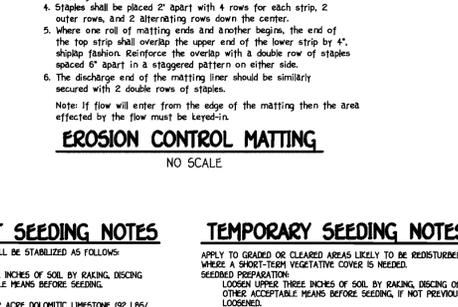
Fertilizer Specifications (in order of preference):

- Straw shall consist of thoroughly threshed wheat, rice or oat straw, reasonable bright in color, and shall not be overly moist, moldy, or excessively dirty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- Wood cellulose fiber shall be specially prepared wood cellulose processed into a uniform fiber product.
- WCM shall be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly seeded areas.
- WCM including dye shall contain no germination or growth inhibiting factors.
- WCM material shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a better-like ground cover, or application having moisture absorption and percolation properties and shall cover and hold grade seed in contact with the soil without inhibiting the growth of the grass seedlings.
- WCM material shall contain no elements or compounds at concentrations levels that will be phytotoxic.
- WCM must conform to the following physical requirements: fiber length to approximately 10 mm, moisture content of 10 to 15%, ash content of 15% maximum and water holding capacity of 50% minimum.

Note: Other fiber mulch should be used in areas where species of grass is desired.

Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

- If grading is completed outside of the seeding season, mulch shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
- When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
- Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1000 lbs per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a minimum of 50 lbs of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch Anchoring - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to steeper slopes where equipment can operate safely. If used on sloping areas, this practice should be used on the contour if possible.
 - When straw mulch is used, the fiber binder shall be applied at a net dry weight of 100 lbs per acre. The fiber binder may be used for anchoring fiber mulch or may be mixed with water and the mixture shall contain a minimum of 50 lbs of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crests of banks. The remainder of area should be applied uniform after binder application. Liquid binders such as ACRIE 1.5 (Vapor 1000) or ACRIE 1.5 (Vapor 1000) Petrolene, Term 100, Term 100A or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3000 feet long.



SEDIMENT/EROSION CONTROL NOTES & DETAILS

TOWNHOUSES
GTW'S WAVERLY WOODS
SECTION 13
LOTS 27 THRU 02 & 05 THRU 72

ZONED: RSA-B-8
TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30'
DATE: JULY, 2004

SHEET 4 OF 4

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer: *Earl D. Collins* Date: 11-10-04

DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Training Program for Approval of Sediment and Erosion Control before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *John Lewis* Date: 4/10/04

OWNER/DEVELOPER

GTW JOINT VENTURE
C/O LAND DESIGN AND DEVELOPMENT CORP.
8000 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
410-490-9105

BUILDER

RYAN HOMES
6095 MARSHALL DRIVE
SUITE 140
ELKRIDGE, MARYLAND 21075
410-796-0980

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *Cindy Hamilton* Date: 12/2/04
Signature: *John Lewis* Date: 12/2/04
Signature: *John Lewis* Date: 12/2/04

Signature of Director: *John Lewis* Date: 12/2/04

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
H-303	17031-17039	5	RSA-B	16	THRD
WATER CODE			SEWER CODE		6030.00
			5993000		

SEDIMENT/EROSION CONTROL NOTES & DETAILS

TOWNHOUSES
GTW'S WAVERLY WOODS
SECTION 13
LOTS 27 THRU 02 & 05 THRU 72

ZONED: RSA-B-8
TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30'
DATE: JULY, 2004

SHEET 4 OF 4



NO.	REVISION	DATE
1	Changed lot numbers for 19-26 to G2-72. Changed prop. TH's on Lots 65-72 to garage units, 6.1m parking spaces adjacent to Hillingdon Road, revised grading as required, changed FF elevs, revised lot numbers in TPA's Block & Permit Information Chart.	11/19/05



ENGINEER'S CERTIFICATE
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer: *Earl D. Collins* Date: 11/10/04
EARL D. COLLINS
 ENGINEER

BUILDER/DEVELOPER'S CERTIFICATE
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer: *John Lewis* Date: 11/10/04
JOHN LEWIS
 DEVELOPER

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: *Jim Meyer* Date: 12/2/04
 U.S. A-Natural Resources Conservation Service

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John R. Roberts* Date: 12/2/04
 HOWARD SCD

OWNER/DEVELOPER
 GTW JOINT VENTURE
 C/O LAND DESIGN & DEVELOPMENT CORP.
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 410-480-9105

BUILDER
 RYAN HOMES, INC.
 6085 MARSHALEE DRIVE
 SUITE 140
 ELKRDGE, MARYLAND 21075
 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Cindy Hamble* Date: 12/7/04
 Chief, Division of Land Development

Signature: *Mark deLoe* Date: 12/10/04
 Chief, Development Engineering Division

Signature: *Mark deLoe* Date: 12/10/04
 Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.
GTW'S WAVERLY WOODS	13	27 thru G2 G5 thru 72

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	RSA-B	16	THIRD	6030.00

WATER CODE	SEWER CODE
H-03	59933000

SITE DEVELOPMENT PLAN

TOWNHOUSES
GTW'S WAVERLY WOODS
 SECTION 13
 LOTS 27 THRU G2 & G5 THRU 72

ZONED: RSA-B
 TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2004
 SHEET 2 OF 4

K:\SDS\PROJ\03785.dwg section 13.dwg 11/10/05 10:03:15 AM

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-481-2055

SDP 05-004

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein. All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug, no hold-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area", hereinafter "Landscape Guidelines" approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications.

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence.

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope.

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

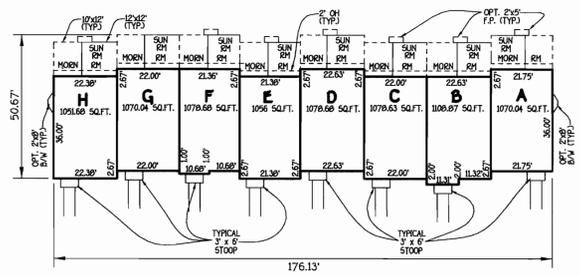
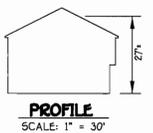
All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. See other plan sheets for more information on grading, sediment control, layout, etc.

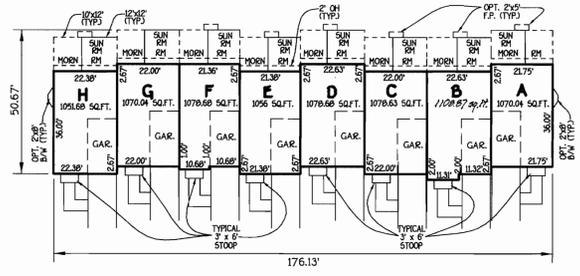
SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
NUMBER OF DWELLING UNITS	44
NUMBER OF TREES REQUIRED: (1:DU SFA: 1:3 DU APTS.)	44
NUMBER OF TREES PROVIDED: SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	44

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
44	○	ACER RUBRUM OCTOBER GLORY OCTOBER GLORY MAPLE	2-1/2" - 3" CALIPER FULL CROWN B/B

FINANCIAL SURETY FOR THE INTERNAL LANDSCAPING IN THE AMOUNT OF \$13,200.00 (44 X \$300.00) FOR THE REQUIRED 44 TREES WILL BE PAID FOR AT TIME OF GRADING PERMIT APPLICATION BY THE BUILDER.



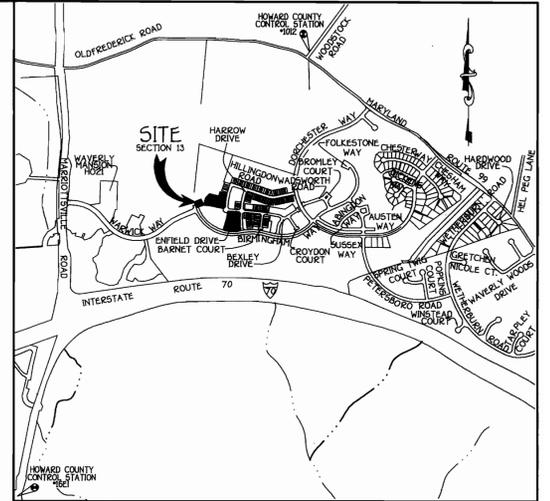
"PRESTON" TYPICAL FOOTPRINT (NON-GARAGE UNITS)
SCALE: 1" = 30'



"PRESTON" TYPICAL FOOTPRINT (GARAGE UNITS)
SCALE: 1" = 30'

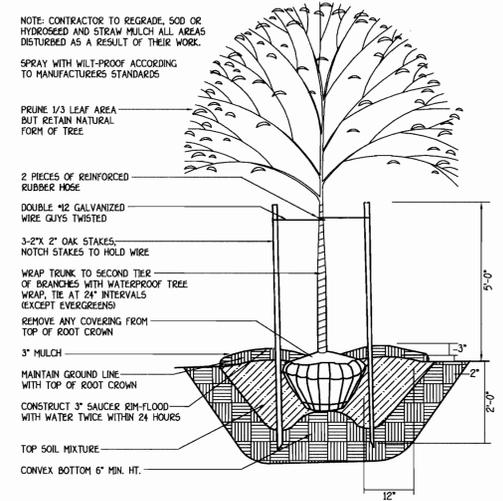
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET, LANDSCAPE NOTES & DETAILS
2	SITE DEVELOPMENT PLAN, LOTS 19-62
3	SEDIMENT/EROSION CONTROL PLAN, LOTS 19-62
4	SEDIMENT/EROSION CONTROL NOTES AND DETAILS

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
X 624.07	SPOT ELEVATION
---	SUPER SILT FENCE
---	PROPOSED WALKOUT
---	EXISTING TREE LINE
---	LIMIT OF DISTURBANCE
---	EXISTING STREET TREES FROM F-04-50, F-01-31 & F-90-25
○	LANDSCAPE TREES



VICINITY MAP
SCALE: 1" = 1200'

- GENERAL NOTES:**
- SUBJECT PROPERTY ZONED RSA-B PER 2/2/04 COMPREHENSIVE ZONING PLAN.
 - THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
 - THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILE# 5-94-07, F-04-44, F-04-50, F-04-54, F-90-25, F-01-31, P 00-17 AND ZONING BOARD CASE NO. 28499-M, W 5 (CONT'D), 24-3059-D & NO. 24-474-D.
 - TOPOGRAPHY TAKEN FROM FINAL ROAD CONSTRUCTION, GRADING AND SEDIMENT CONTROL PLANS.
 - BOUNDARY SURVEY PERFORMED BY FISHER COLLINS AND CARTER INC. ON OR ABOUT AUGUST, 1990.
 - HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS:
HOWARD COUNTY MONUMENT NO. 1002 N 60060177 E 1345336.7560 ELEV. 445.577
HOWARD COUNTY MONUMENT NO. 1061 N 9432503322 E 1340992.7100 ELEV. 509.924
 - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
 - THIS PLAN IS FOR HOUSE SITING AND LOT GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAYS OF THIS SLOP. ARE NOT USED FOR CONSTRUCTION FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-01-31, F-04-50 AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-3059-D, AND 24-474-D.
 - CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
 - STORMWATER MANAGEMENT OBLIGATIONS ARE FULFILLED UNDER F-95-174.
 - SITE ANALYSIS DATA:
A. TOTAL PROJECT AREA: 2,509 AC+ OR 109,292.04 SQ. FT.
B. AREA OF PLAN SUBMISSION: 2,509 AC+ OR 109,292.04 SQ. FT.
C. LIMIT OF DISTURBED AREA: 3,292 AC+ OR 142,950.00 SQ. FT.
D. PRESENT ZONING: RSA-B
E. PROPOSED USE FOR SITE AND STRUCTURES: SINGLE FAMILY ATTACHED DU.
F. TOTAL NUMBER OF UNITS PROPOSED: 44
G. TOTAL NUMBER OF UNITS PROPOSED: 44
H. NUMBER OF PARKING SPACES REQUIRED: 88
I. NUMBER OF PARKING SPACES PROVIDED: 104
J. INCLUDING 78 GARAGE PARKING SPACES
 - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 1612.4 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$13,200.
 - GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY IN ACCORDANCE WITH SECTION 133D.2.2 OF THE HOWARD COUNTY ZONING REGULATIONS.
 - TYPICAL DRIVEWAY APPROX DETAIL FOR ALL GARAGE UNITS TO BE HOWARD COUNTY CLOSED SECTION DETAIL, FOR SPECIFICATION HO. CO. STANDARD DETAIL 2.6.01.
 - THE FOREST CONSERVATION OBLIGATION FOR SECTION 13 IS BEEN FULFILLED BY F-04-50.
 - IN ACCORDANCE WITH SECTION 129 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 15 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK. OPEN DECKS ARE NOT CONSIDERED STRUCTURES FOR CALCULATING LOT COVERAGE ON SINGLE FAMILY ATTACHED DWELLING PER HOWARD COUNTY ZONING REGULATIONS SECTION 129A.2.
 - ALL DWELLINGS ARE SUBJECT TO SECTION 129A.1 D AND C OF THE HOWARD COUNTY ZONING REGULATIONS.
 - DEVELOPERS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
WIDTH - 12' (4" SERVING MORE THAN ONE RESIDENCE);
SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/ TAR & CHIP COATING (1-1/2" MIN);
GEOMETRY - MAX. 10% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS;
STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (HS);
DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
 - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS, OR THEIR BUFFERS AND FOREST CONSERVATION AREAS.



TREE PLANTING DETAIL
NOT TO SCALE

BUILDER/DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 1612.4 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

John Lewis 11/11/04
JOHN LEWIS DATE

No.	Revision	Date
1	Changed lot numbers for Lots 19-62 to 65-72, changed proposed THs on Lots 65-72 to garage units, eliminated 17 parking spaces adjacent to Hillingdon Road, revised grading & FF elevations as required, revised lot numbers in Title Block & Permit Information Block, revised Gen Note #12, Item T, & Lot Information Chart.	11/19/05



ENGINEER'S CERTIFICATE
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
Earl D. Collins 11/10/04
Signature of Engineer EARL D. COLLINS Date

BUILDER/DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
John Lewis 11/11/04
Signature of Developer JOHN LEWIS Date

Approved for HOWARD SCD and meets Technical Requirements.
John E. Kobus 12/2/04
Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
John E. Kobus 12/2/04
Date

OWNER/DEVELOPER
GTW JOINT VENTURE
C/O LAND DESIGN & DEVELOPMENT CORP.
8000 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
410-480-9105

BUILDER
RYAN HOMES, INC.
6085 MARSHALEE DRIVE
SUITE 140
ELKRIDGE, MARYLAND 21075
410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Carla Hamstra 12/7/04
Chief, Division of Land Development Date

John E. Kobus 12/16/04
Chief, Department of Planning and Zoning Date

John E. Kobus 12/6/04
Director - Department of Planning and Zoning Date

PROJECT	GTW'S WAVERLY WOODS	SECTION	13	LOTS NO.	27 THRU 62 & 65 THRU 72
PLAT	17031-17039	BLOCK NO.	5	ZONE	RSA-B
TAX/ZONE	16	ELEC. DIST.	THIRD	CENSUS TR.	6030.00
WATER CODE	H-03	SEWER CODE	5993000		

TITLE SHEET, LANDSCAPE NOTES & DETAILS

TOWNHOUSES
GTW'S WAVERLY WOODS
SECTION 13
LOTS 27 THRU 62 & 65 THRU 72

ZONED: RSA-B
TAX MAP NO: 16 PARCEL NO.: 20 GRID NO.: 5
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2004
SHEET 1 OF 4

SDP 05-004



NO.	REVISION	DATE
1	Revision Changed lot numbers for 19-26 to 65-72 Changed prop. TH's on Lots 65-72 to garage units, elim. parking spaces adjacent to Hillington Road, revised grading as required, changed FF elevs, revised lot numbers in Title Block & Permit Information Chart.	11/19/04
2	Rev. hse. & grd. lots 58-62 to show Ex. Cond.	6-28-05



ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer: *Earl D. Collins* Date: 11-19-04
EARL D. COLLINS
 PROFESSIONAL ENGINEER

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *John Lewis* Date: 11/11/04
JOHN LEWIS

APPROVED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Signature: *Jim Meyer* Date: 12/2/04
 U.S.A. - Natural Resources Conservation Service

Signature: *John K. Kautzman* Date: 12/2/04
 This development plan is approved for soil erosion and sediment control by the HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 Howard SCD

OWNER/DEVELOPER
 GTW JOINT VENTURE
 C/O LAND DESIGN & DEVELOPMENT CORP.
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 410-480-9105

BUILDER
 RYAN HOMES, INC.
 6085 MARSHALEE DRIVE
 SUITE 140
 ELKBRIDGE, MARYLAND 21075
 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Andi Hambo* Date: 12/2/04
 Chief, Division of Land Development

Signature: *Paul W. Williams* Date: 12/16/04
 Chief, Development Engineering Division

Signature: *Paul W. Williams* Date: 12/16/04
 Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.
GTW'S WAVERLY WOODS	13	27 thru 72

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	RSA-B	16	THIRD	6030.00

WATER CODE	SEWER CODE
H-03	5993000

SITE DEVELOPMENT PLAN

TOWNHOUSES
GTW'S WAVERLY WOODS
 SECTION 13
LOTS 27 THRU 02 & 05 THRU 72

ZONED: RSA-B
 TAX MAP NO: 16 PARCEL NO: 20 GRID NO: 5
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2004

SHEET 2 OF 4

SDP 05-004

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NO.	REVISION	DATE
1	Revision Changed lot numbers for 19-26 to 65-72. Changed prop. TH's on Lots 65-72 to garage units, elim 17 parking spaces adjacent to Hillington Road, revised grading as required, changed FF elevs; revised lot numbers in Title Block & Permit Information Chart.	1/19/04
2	Rev. hse. & grd. lots 58-62 to show Ex. Cond.	6-28-05
3	Rev. grd. lots 47-49 to show Ex. Conditions	9/16/05



ENGINEER'S CERTIFICATE
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer: *Earl D. Collins* Date: 11/10/04
EARL D. COLLINS
 ENGINEER

BUILDER/DEVELOPER'S CERTIFICATE
 I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer: *John Lewis* Date: 11/11/04
JOHN LEWIS
 DEVELOPER

Approved for HOWARD SCD and meets Technical Requirements.

Signature: *Jim Meyer* Date: 12/12/04
 U.S. Fish & Wildlife Service
 Conservation Service

Signature: *John R. Roberts* Date: 12/12/04
 HOWARD SOIL CONSERVATION DISTRICT

OWNER/DEVELOPER
 GTW JOINT VENTURE
 C/O LAND DESIGN & DEVELOPMENT CORP.
 SUITE 140
 ELLICOTT CITY, MARYLAND 21043
 410-480-9105

BUILDER
 RYAN HOMES, INC.
 6085 MARSHALLE DRIVE
 SUITE 140
 ELK RIDGE, MARYLAND 21075
 410-796-0980

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Chris Hambley* Date: 12/1/04
 Chief, Division of Land Development

Signature: *John Vermeulen* Date: 12/1/04
 Chief, Development Engineering Division

Signature: *Mark H. Hays* Date: 12/1/04
 Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.
GTW'S WAVERLY WOODS	13	27 thru 62 65 thru 72

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
17031-17039	5	RSA-B	16	THIRD	6030.00

WATER CODE	SEWER CODE
H-03	5993000

SITE DEVELOPMENT PLAN

TOWNHOUSES
GTW'S WAVERLY WOODS
 SECTION 13
LOTS 27 THRU 62 & 65 THRU 72

ZONED: RSA-B
 TAX MAP NO: 16 PARCEL NO.: 20 GRID NO.: 5
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2004

SHEET 2 OF 4

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21044
 (410) 661-2399

SDP 05-004

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